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## **EDUCATION**

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**Doctor of Philosophy**, Science and Technology Education, Mahidol University, Thailand, 2008

**Master of Science**, Physics, Mahidol University, Thailand, 2003

**Bachelor of Science**, Electronics Physics, Thammasat University, Thailand, 1998

## **ACADEMIC HONORS AND AWARDS**

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- ‘Invention Award’ from National Research Council of Thailand, 2018
- ‘Bronze medal Award’ from 2013 Taipei Int’l Invention Show and Technomart, Taiwan, 2013
- ‘Honor of Invention’ from World Invention Intellectual Property Associations (WIIPA), Taiwan, 2013
- ‘Invention Award’ from National Research Council of Thailand, 2013
- Supported Grant for International Conference Presentation from Australasian Association for Engineering Education organizers, Australia, 2012
- Research Grant from Thailand Research Fund, 2011-present
- Research Grant from National Research Council of Thailand, 2011-present
- Thesis Awards in Social Science, Office of National Research Council of Thailand, 2011
- Inventor Award (Excellence) in Social Science, Office of National Research Council of Thailand, 2009
- Thesis Awards (Honorable Mention Award Doctoral level) in Humanities, Social Science and Education, The Faculty of Graduate Studies, Mahidol University, 2009
- The Institute for the Promotion of Teaching Science and Technology Scholarship, Mahidol University, 2004 – 2007
- Medal and diploma of honor from The Professor Dr. Tab Nilanidhi Foundation, The graduate who has the highest score in the Bachelor of Science program (Physics), Thammasat University, 1998.

## **ACADEMIC EXPERIENCE**

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**Design and Technology Expert**, The Institute for the Promotion of Teaching Science and Technology, Thailand, *since March 2017*

**STEM Ambassador**, The Institute for the Promotion of Teaching Science and Technology, Thailand, *since March 2016*

**Competitive committee**, Secondary school students’ project design and technology competition, Hatyairatprachasun School, Thailand, *9-10 December 2015*

**Assistant Speaker**, Active Learning Workshop, Mahidol University, Thailand, *6-15 January 2015*

**Assistant Speaker**, Optical Data Transmission and Wavelength Division Multiplexing, Active Learning in Optic and Photonics (ALOP): Training Physics Trainers, Faculty of Education, Chiang Mai University, Thailand, 21-25 October 2013

**Assistant Speaker**, Active Learning Workshop (ALW) in Science and Engineering, Swinburne University of Technology, Sarawak, Malaysia, 8 – 10 July 2008

**Assistant Speaker**, Activity Based Learning in Optics and Photonics, ALOP ASIA 2006, Miranda House, the prestigious college for women at the University of Delhi, India, 6 – 11 November 2006

**Visiting Scholar**, Swinburne University of Technology, Faculty of Engineering & Industrial Sciences, Hawthorn, Melbourne, Victoria, Australia, July 2006 – July 2007

**Scientist**, Mahidol University, Faculty of Science, Bangkok, Thailand, October 1998 – October 2004

## ADMINISTRATIVE EXPERIENCE

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- **Deputy Director for Education and Networking**, Institute for Innovative Learning, Mahidol University, 2018-
- **Acting Deputy Director**, Institute for Innovative Learning, Mahidol University, 2017-2018
- **Deputy Director for Information Technology**, Institute for Innovative Learning, Mahidol University, 2010-2011
- **Deputy Director for Information Technology**, Institute for Innovative Learning, Mahidol University, 2009-2010
- **Assistant Director of Information Technology**, Institute for Innovative Learning, Mahidol University, 2009-2009

## PUBLICATIONS

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### Book Chapters

- Pelzang, T., **Nopparatjamjomras, S.** & Nopparatjamjomras, T. R. (2014). Enhancing Grade 10 Bhutanese Students' Understanding of DNA and Chromosome Structure Concepts. In R.P. Devadason, I. Zurida, and K.T. Ng, *Empowering the Future Generation through Science Education* (pp 63-75). SEAMEO RECSAM.

### Brief Paper

- Nopparatjamjomras, T. R., & **Nopparatjamjomras, S.** (2011). Teacher development program: tailor made for science teachers in welfare schools. SEAMEO RECSAM, Malaysia.

### International Journals

- **Nopparatjamjomras, S.**, Kalaya, T., & Nopparatjamjomras, T. R. (2018). 7th Graders' understanding of a fire caused by an electrical short circuit. *Journal of Physics: Conference Series*, 1144, 012123. doi:10.1088/1742-6596/1144/1/012123
- Khaing, S. W., **Nopparatjamjomras, S.**, Nopparatjamjomras, T. R., & Chitaree, R. (2018). Development of Arduino-based logic gate training kit. *Journal of Physics: Conference Series*, 1144, 012134. doi:10.1088/1742-6596/1144/1/012134
- Hlaing, P., Nopparatjamjomras, T., & **Nopparatjamjomras, S.** (2018). Digital technology for preventative health care in Myanmar. 4(3), 117-121. doi:10.4103/digm.digm\_25\_18
- Sujariththam, T., Emarat, N., Tanamatayarat, J., Arayathanitkul, K., & **Nopparatjamjomras, S.** (2016). Levels of Students' Understandings of Electric Field Due to a Continuous

Charged Distribution: A Case Study of a Uniformly Charged Insulating Rod. *International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, 10, 237-242.

- Tamang, S., **Nopparatjamjomras, S.**, Chitaree, R., & Nopparatjamjomras, T. R. (2015). Using the missing pin to challenge concepts of refraction and total internal reflection. *Physics Education*, 50(1), 28.
- **Nopparatjamjomras, S.**, Nopparatjamjomras, T. R., & Chitaree, R. (2011). Using hidden messages created by Microsoft® Word to teach students about colour filters. *Teaching Science: The journal of Australian Science Teachers Association*, 57(4), 49-50.
- A. Mazzolini, T. Edwards, W. Rachinger, **S. Nopparatjamjomras**, & Shepherd, O. (2011). The use of interactive lecture demonstrations to improve students' understanding of operational amplifiers in a tertiary introductory electronics course. *Latin American Journal of Physics Education*, 5(1), 147-153.
- **Nopparatjamjomras, S.**, & Panijpan, B. (2010). Emperor's crown model teaches fluidics. *Physics Education*, 45(2), 137.
- Panijpan, B., Sujarittham, T., Arayathanitkul, K., Tanamatayarat, J., & **Nopparatjamjomras, S.** (2009). A magnetic set-up to help teach Newton's laws. *Physics Education*, 44(6), 599.
- **Nopparatjamjomras, S.**, Panijpan, B., & Huntula, J. (2009). Newton's third law on a scale balance. *Physics Education*, 44(5), 484-487.
- **Nopparatjamjomras, S.**, Chitaree, R., & Panijpan, B. (2009). A handheld LED coloured-light mixer for students to learn collaboratively the primary colours of light. *Physics Education*, 44(2), 123-128.

### **National Journal**

- **Nopparatjamjomras, S.**, Soankwan, C., & Chitaree, R. (2004). Construction and application of an automatic Stokes parameter photopolarimeter. *Songklanakarin J Sci Technol*, 26(2), 285-294.

### **Proceedings**

- Norsaputra, A., Nopparatjamjomras, T. R., **Nopparatjamjomras, S.**, & Chitaree, R. (2017). *Development of Stefan-Boltzmann board game based on game characteristics*. Paper presented at the The 3<sup>rd</sup> International Conference on Education, Kuala Lumpur, Malaysia.
- Aung, L. H., Nopparatjamjomras, T. R., & **Nopparatjamjomras, S.** (2017). *Medical Doctors' Procedural Skill Performance and Attitude Toward Ultrasound-Guided Pericardiocentesis Model*. Paper presented at the The 2nd International Conference on Applied Science and Health, Faculty of Graduate Studies, Mahidol University, Thailand.
- Dema, M., **Nopparatjamjomras, S.**, Chitaree, R., Nopparatjamjomras, T. R. (2015). Developing and Validating a DC Motor Multiple Choice Questionnaire for High School Bhutanese Students. In the 3rd CAS National and International Conference 2015 (CASNIC 2015).

- Tamang, S., **Nopparatjamjomras, S.**, & Nopparatjamjomras T. R. (2014, February 5-7). Bhutanese students' ability to apply the concepts of light reflection and refraction to the situations related to a fish tank. In Proceedings of the 2nd ASEAN Plus Three Graduate Research Congress (2nd AGRC), Bangkok, 527-534.
- **Nopparatjamjomras, S.**, Nopparatjamjomras, T. R.\* (2012, 3-5 December). Students' understanding about a brightness of light bulbs connected in DC electric circuit. Paper presented at Australasian Association for Engineering Education 2012, Melbourne, Australia.
- **Nopparatjamjomras, S.**, Nopparatjamjomras, T. R.\* (2012, 18-19 September). Development of coloured-light mixer for teaching coloured light and colour perception concepts. Paper presented at International Conference on Physics 2012, Yogyakarta, Indonesia.
- Nopparatjamjomras, T. R., & **Nopparatjamjomras, S.** (2012, 15-16 September). Education for Disadvantaged Students in Sociocultural Contexts of Thailand. Paper presented at the International Conference on Current Issues in Education (ICCIE), Yogyakarta, Indonesia.
- Win Thu Zar, Hla Myo Tun, & **Suchai Nopparatjamjomras.** (2012). *Design Analysis of Fin Actuator for Ship Stabilization System Using MATLAB.* Paper presented at the The First ASEAN Plus Three Graduate Research Congress (AGRC), Chiang Mai University, Thailand.
- Jigme, S. & **Nopparatjamjomras, S.** (2011, 9 - 10 September). Simple Activities of Buoyant Force for High School Students. Paper presented at the 4th International Conference on Educational Research (ICER) 2011: Learning Community for Sustainable Development, Khon Kaen.
- Anchaleesathaporn, O., Nopparatjamjomras, T. R.\*, & **Nopparatjamjomras, S.** (2011, 9 - 10 September). Teaching Color Extraction from Plants in Junior High School Level. Paper presented at the 4th International Conference on Educational Research (ICER) 2011: Learning Community for Sustainable Development, Khon Kaen.
- Sarasalin, S., Nopparatjamjomras, T. R.\*, & **Nopparatjamjomras, S.** (2011, 9 - 10 September). Classification of Matter for Junior High School Students in Multicultural Context. Paper presented at the 4th International Conference on Educational Research (ICER) 2011: Learning Community for Sustainable Development, Khon Kaen.
- Zar, W. T. & **Nopparatjamjomras, S.** (2011, 9 - 10 September). Teaching Simple DC Electric Circuits in Multicultural Classroom. Paper presented at the 4th International Conference on Educational Research (ICER) 2011: Learning Community for Sustainable Development, Khon Kaen.
- **Nopparatjamjomras, S.**, Zar, W. T., Soankwan, C., & Tun, H. M. (2011). *Thai and Myanmar first year undergraduate science students' misconception about simple DC electric circuit in terms of brightness and current.* Paper presented at the Siam Physics Congress, Ambassador City Jomtien Hotel, Pattaya, Thailand.
- **Nopparatjamjomras, S.**, & Chitaree, R. (2009, 5th - 7th July). *Using students' misconceptions of primary coloured lights to design a hands-on coloured light mixer.* Paper presented at the Education & Training in Optics & Photonics, Technium Optic, St. Asaph, North Wales, UK.
- **Nopparatjamjomras, S.**, Wuttiptom, S., & Chitaree, R. (2007, 6-9 November 2007). *iPODs: Inquiry-Based Learning Activities in Light and Color.* Paper presented at the ICASE Asian Symposium 2007, Pattaya, Thailand.

## SEMINAR PRESENTATIONS

- **Nopparatjamjomras, S.**, & Chitaree, R. (2009, 5th - 7th July). *Using students' misconceptions of primary coloured lights to design a hands-on coloured light mixer.* Paper

- presented at the Education & Training in Optics & Photonics, Technium Optic, St. Asaph, North Wales, UK.
- **Nopparatjamjomras, S.**, Panijpan, B., Chitaree, R., Soankwan, C., & Mazzolini., A. P. (2008). An inquiry-based approach to understanding colour via the use of colour filters. *Physics Education*.
  - Chitaree, R., **Nopparatjamjomras, S.**, Soankwan, C., Arayathanitkul, K., & Emarath, N. (2006). *Conceptual change in practice: Primary colored lights*. . Paper presented at the The First National Symposium on Physics Graduate Research.
  - **Nopparatjamjomras, S.**, Ranusawud, A., Soankwan, C., & Chitaree, R. (2005). *The Incremental Conception of Sound Wave in a Resonance Tube by Demonstration*. Paper presented at the 15 th Congress on Science and Technology in School.
  - **Nopparatjamjomras, S.**, Chitaree, R., & Soankwan, C. (2005a). *The application of MCS-51 to Stokes parameters measurement*. Paper presented at the Second National Conference on Optics and Applications (NCOA-2).
  - **Nopparatjamjomras, S.**, Chitaree, R., & Soankwan, C. (2005b). *Development of Multimedia for Inquiry Teaching on Color Mixing*. Paper presented at the National Conference on Undergraduate Physics Education.
  - **Nopparatjamjomras, S.**, Chitaree, R., Tongchai, A., Suppapittayaporn, D., & Phuapaiboon, U. (2005). *The Construction of Color Light Mixer used for Teaching Color Light Mixture Topic*. Paper presented at the 31 st Congress on Science and Technology of Thailand.
  - **Nopparatjamjomras, S.**, Ranusawud, A., Soankwan, C., Arayatanitkul, K., Emarat, N., & Chitaree, R. (2004). *The Correction of Misconception in Sound Wave in a Resonance Tube*. Paper presented at the 30 th Congress on Science and Technology of Thailand.
  - **Nopparatjamjomras, S.**, Chitaree, R., & Soankwan, C. (2004). *The application of the rotating quarter-wave retarder polarimeter for retardance measurement*. Paper presented at the First National Conference on Optics and Applications (NCOA-1).
  - **Nopparatjamjomras, S.**, Chitaree, R., & Soankwan, C. (2003). *A construction of polarization analyzer unit based on the Fourier analysis using rotating quarter-wave plate technique*. Paper presented at the 29 th Congress on Science and Technology of Thailand.
  - **Nopparatjamjomras, S.**, Chitaree, R., & Soankwan, C. (2002). *Importance of using the high resolution A/D for the data acquisition in the optical polarization state analysis*. Paper presented at the 28 th Congress on Science and Technology of Thailand.
  - **Nopparatjamjomras, S.**, Chitaree, R., & Soankwan, C. (2000). *The application of the Fourier analysis for measuring polarization parameters*. Paper presented at the 26 th Congress on Science and Technology of Thailand.

## **AREA OF INTERESTS**

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- Development of Teaching and Learning Activities, Instructional Materials based on PODS learning cycle and Assessment in Physics
- Active Learning
- Polarization
- Electronics
- Microcontroller and Computer Programming
- Science Teacher Professional Development